

ABSTRACT OF DISCLOSURE

To reduce the processing required to embed a code into image data and decode the code. The present invention Includes a block dividing section 101 that divides original image data I0 into a plurality of blocks ($M \times N$); an averaging section 103 that extracts each average density (characteristic amount) in a plurality of blocks; and an encoding section 106 that embeds a code C (a plurality of bits) into a plurality of blocks by relating one code (one bit out of the code C) to each pair of blocks mutually located in near position in the plurality of blocks based on a magnitude relation of the average density.